

EARTH EX 2017

Middle Planning Conference / 20 April 2017



EARTH EX™ 2017



EARTH Ex 2017 MPC Sector Objectives

- Review EARTH Ex Plan, Concepts and Delivery
- By Sector Solicit Areas for Phase 4 Feedback*

Note: Senior Executive and Senior Operational Decision Makers



EARTH Ex BLUF*

- Critical Life Line Cross Sector Exercise - 23 August 2017
- Opportunity to test and refine policies and procedures for responding to a long duration power outage.
- Come as you are exercise for executive and senior operational managers. No ramp up or pre-exercise work required.
- Opportunity to provide critical feedback to federal and state agencies to improve preparedness and operational support.
- No cost to participate.
- Widely distributed exercise using new DHS exercise tools
- Four hour exercise over three advancing phases.

EARTH Ex Concept

- EARTH Ex 2017 is a come as you are opportunity for executive and senior operational managers in all critical lifeline sectors to review, develop and extend the policies and procedures for responding to a long duration power outage.
- EARTH Ex 2017 is a widely distributed exercise event, using new electronic exercise tools, advancing over three phases. It enables an examination of the response and restoration decisions and actions lifeline sectors will face during a long duration power outage.
- EARTHEX 2017 supports in-depth discussion on roles, responsibilities, essential decision making, and communications requirements.

EARTH EX™ 2017



EARTH Ex Design

- EARTH Ex 2017 is a decentralized, international, multi-sector, self assessed exercise focused on the impact of long duration power outage across three distinct timelines.
- **Who will benefit from EARTH Ex:**
 - Decisions Makers
 - Planners
 - Resource Managers
 - Partner Agencies



EARTH Ex Over Arching Objective

Improve community resilience to long duration power outage events through cross-sector exercises.

EARTH EX 2017



EARTH Ex Organizational Focus & Discussion Areas

- Testing Existing Plans, Policies, and Playbooks
- Roles and Responsibilities
- Setting the Priority for Restoration
- Conducting Assessments
- Determining Priorities
- Sharing Information

EARTH Ex Operational Lanes

- **Electric** (Generation, Transmission, Distribution), Black Start Decisions
- **Water** and Waste Water
- **Oil** and Natural **Gas**
- **Federal Government** – Energy, Critical Infrastructure, Emergency Mgt.
- **State Government** – Emergency Management, National Guard, Health
- **Regulatory**
- **Non-Governmental Organization** – Volunteers Active In Disasters
- **Citizen Preparedness** – Understanding Individual and Family Preparedness
- **NISC** – Sharing Information and Situational Awareness
- **Private Sector**

EARTH Ex Specialized Lanes (DC Only)

- Federal Coordination Lane
- Federal Contingency Lane
- On site in DC, Facilitated, By Invitation

EARTH Ex 2017 Assumptions

- All of the information to drive the exercise discussion will be provided
- Organizations will be encourage to apply their own internal policies and procedures to develop solutions and responses to the exercise problem
- Access to the internet will be available
- Each organization will have at least 1 person to serve as a facilitator/recorder
- Each organization will be internally assessed

EARTH Ex 2017 Opportunities

- Assessment (Manpower/System Impact)
- Back Up Power Requirements
- Setting and Communicating Priorities
- Resource Mobilization – Standing Orders
- Resource Prioritization
- Initial Action Planning
- Key Decisions
- Developing Situational Awareness



EARTH Ex Play

- Self-facilitated, senior executive discussion based table top
- Register as an organization and self-identify for an exercise lane or lanes
- Log into the exercise site, supply credentials (from registration and select the First Phase)
- Consume and digest the information deliverables
- Review the advancing Injects
- Set or appoint a timer (designed for 4 hours, can be expanded locally)
- Phases are designed to be completed in an hour, however each participating site may choose to take more time. You can always loop back.
- Discuss the scenario and advancing inject
- Develop short statement group responses to the phase response questions. These responses will be used to help advance the EIS Council EPRO Sector playbooks
- Advance to the next phase.
- There are 3 dynamic phases and one reflective phase which will collect feedback on advancing resilience support within the sector.

EARTH Ex 2017 Exercise Phases

Phase 1 \ Day 3 of a Widespread Power Outage/No Solution

Electric Subsector has completed an initial assessment and determined that essential components of generation and substation equipment are non-functioning and cannot be restored. Voltage collapse has occurred. All sites that do not have an onsite backup power generation capability with more than 72 hours of on site diesel fuel are offline. Millions are without power.

EARTH Ex 2017 Exercise Phases

Phase 2 \ Day 4-6 Widespread Power Outage/Critical Decisions, Assessments & Actions

Electric Subsector must begin the detailed assessment of components at generations sites and all substations to determine component impact and status. All elements of generation, transmission and distribution have been impacted. All emergency management elements are online due to cascading impacts from the extended power outage. No restoration time estimate is available until Day 6 assessments are concluded. Alternate communications, resource prioritization (spare tire – published in April), manpower, tools for reliability and management are needed.

EARTH Ex 2017 Exercise Phases

Phase 3 \ Day 15+, Widespread Power Outage, Black Start, Communications, Cross Sector Coordination

Electric Subsector has completed the detailed assessment and a Black Start cranking path must be determined and assembled. Public prioritization of critical lifeline sectors, medical, water system, continuity of government functions and communications has been supplied.

Phase 1-3 Breakdown

- Each Phase (1-3) is a distinct action phase for a long duration power outage
- Each Phase (1-3) begins and ends with a framing inject to set status
- Each Phase will follow a similar estimated timeline
 - Framing Inject & Advancing Inject - 15 Minutes
 - Active Discussion and Planning – 30 Minutes
 - Phase Response Period – 15 Minutes
 - Phase End Inject – Closing Inject
- Phase 4 - Open reflection to develop and record recommendations on direction, support and resilience requirements

Phase 4 - Open Reflection and Response

- **Sector Specific:** Develop and Record Recommendations on Direction, Support and Resilience Requirements
- Gather and Provide Feedback on Policy and Program Areas
- Highlight Resource and Coordination/Information Areas for Advancement

EARTH Ex Sector Phase 4 - Developing Solutions, Directions and Consensus – Open Reflection

- What **policies** or **external support** are needed to effectively respond to a long duration power outage or a national threat scenario (local, state, federal)?
- What areas need more **training** and **coordination**?
- How can we improve cross sector **information sharing** ?
- What **information** most critical to your efforts do you do not currently have?
- What the key sector **resilience investments** are needed to be prepared for a long duration power outage (Black Sky)?
- **FAST Act** feedback
- Power Outage Incident Annex (**POIA**) feedback and understanding

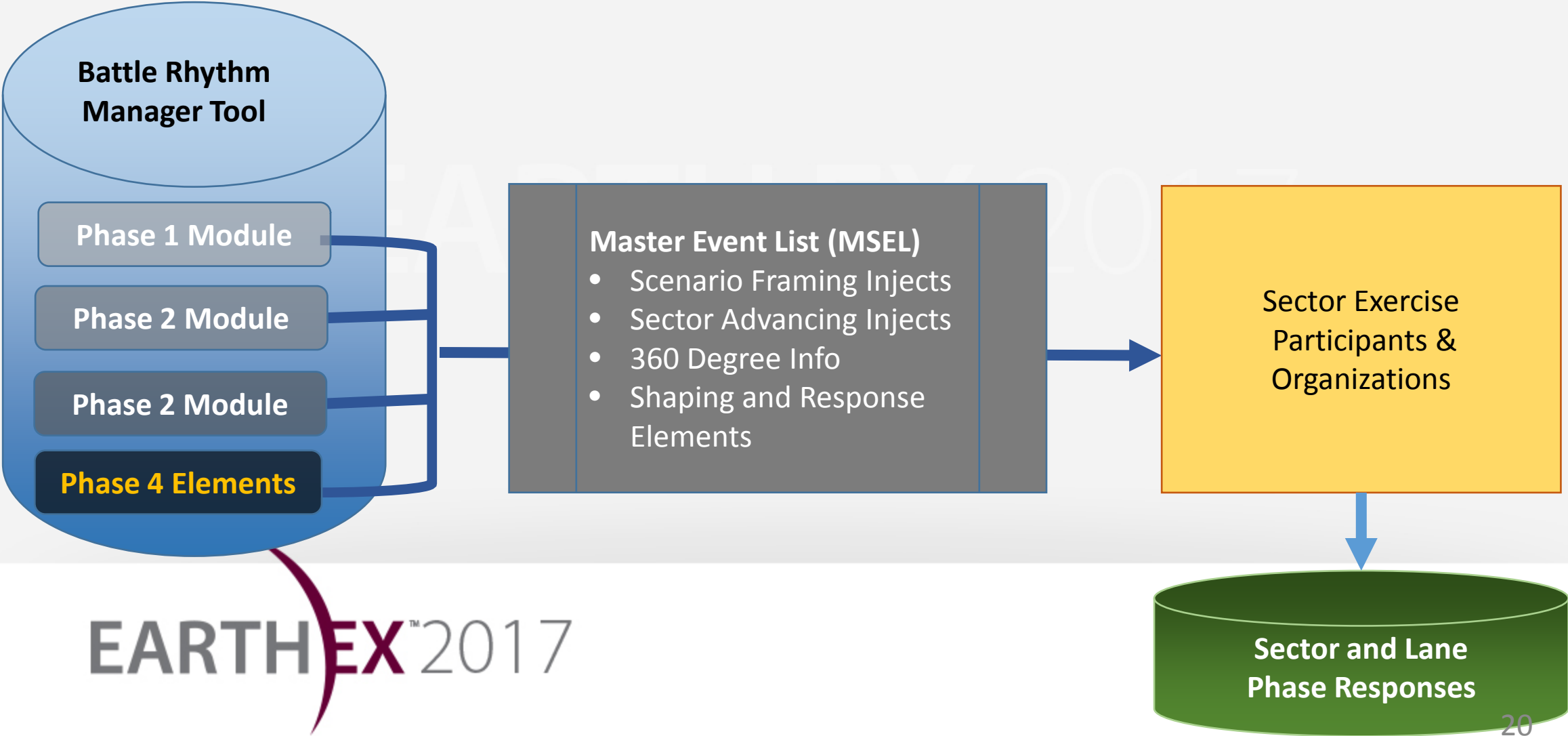
Follow up E-Mail Feedback Requested

EARTH Ex Design Elements

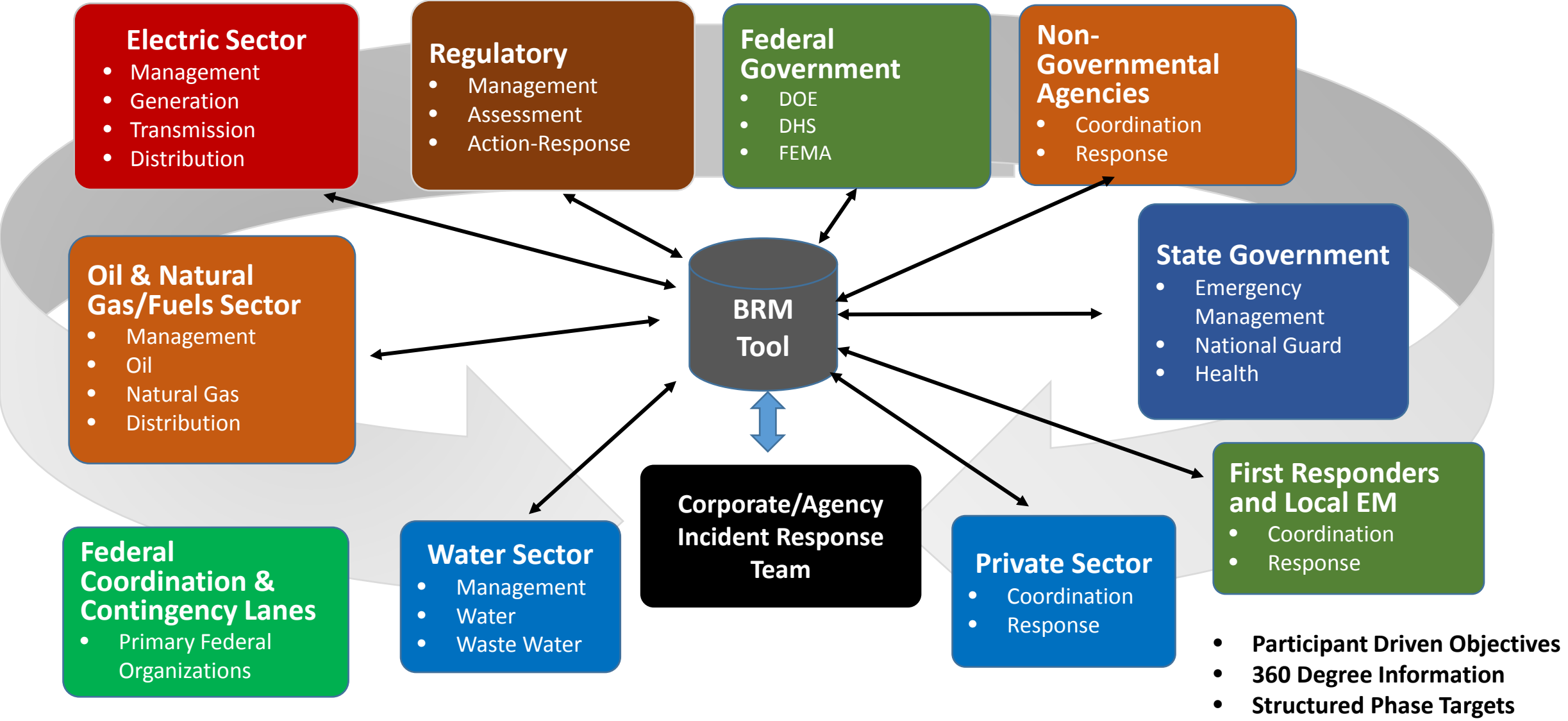
- EARTH Ex is designed to be delivered virtually using electronic tools.
- The Exercise Delivery Mechanism – the Battle Rhythm Manager (BRM) - will support multiple lanes of play and multiple phases of the exercise.
- Back Up Systems will be in place.
- The EARTH Ex 2017 (BRM) will be available for play on the morning of August 23rd.



Exercise Control - Battle Rhythm Manager (BRM)



EARTH Ex Information Sharing and Lane Play



Exercise Element Overview

Pre-Exercise Actions

- Register For the Exercise (Organization or Individual)
- Receive Registration Confirmation
- Receive Pre-Exercise Information
- Receive Initiation E-mail
Thursday, 23 August

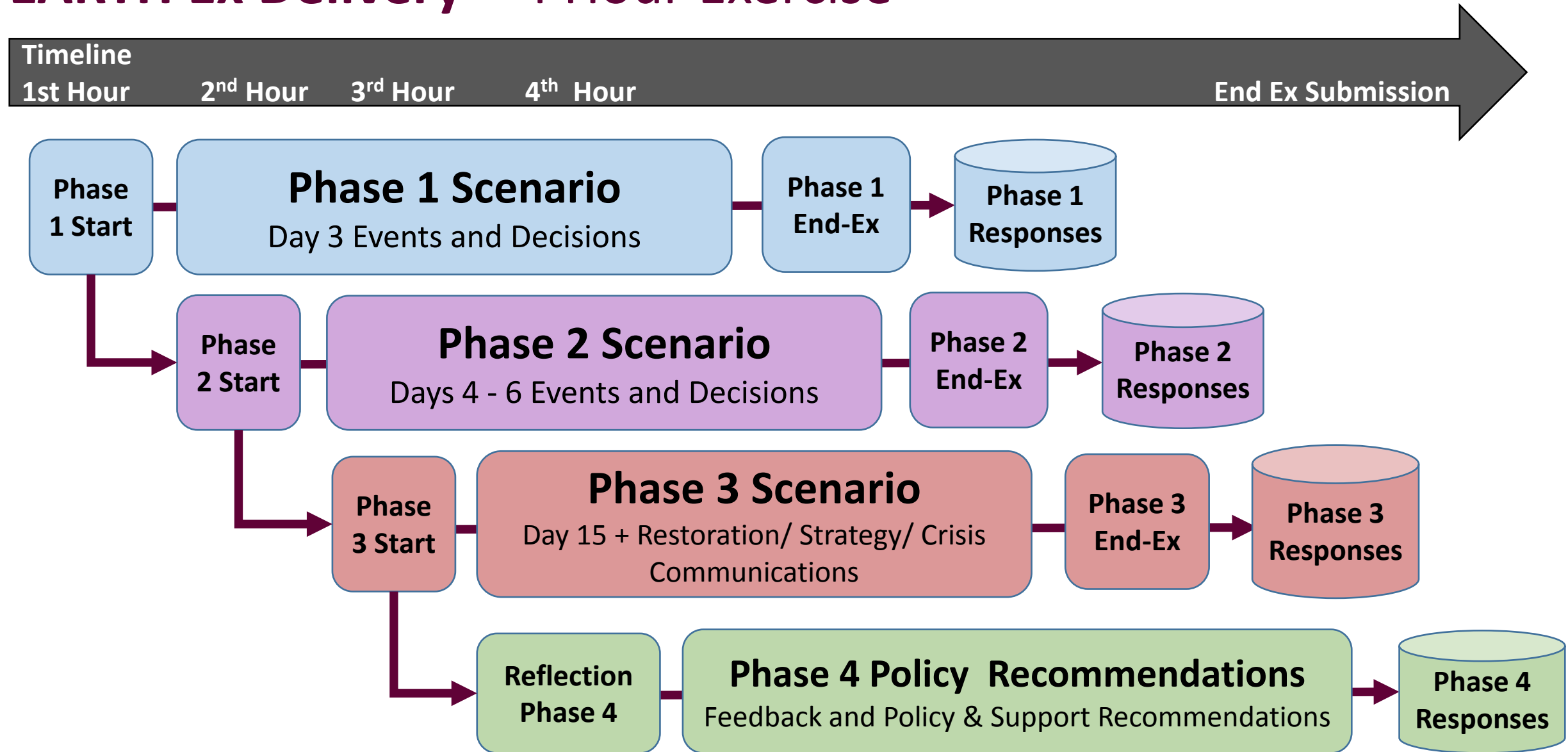
Exercise Actions

- Assemble Exercise Team
- Log-on and Select Phase 1
- Receive Phase 1 Information
 - Framing Inject
 - Sector Specific Situational Awareness
 - Advancing Inject
 - Probing Questions
 - Consideration Areas
 - Exercise Discussion Time
 - Complete Short Answer Responses (Captured in the Battle Rhythm Tool)
 - Conclude Phase
- Move on to the next 2 Phases
Phase 2 and Phase 3

Conclude the Exercise

- Phase 4 - Reflection and Advancement
- Conduct Group Discussion on the Topics provided
- Prepare Responses
- Update the Battle Rhythm Manager with Phase 4 Response
- Conclude Exercise
- Receive Exercise Feedback

EARTH Ex Delivery – 4 Hour Exercise

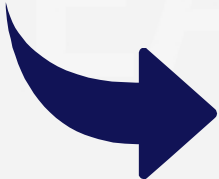


Electric Sub-Sector Objectives

Phase 1 (Needs Assessment)

- Impact Analysis
- Internal Coordination Activities
- Operational Challenges (Internal)

What happened?
What resources are available?
What are the first steps to be taken?



Phase 2 (External Coordination & Assessment)

- Critical Skills Identification
- Essential Task Execution
- Multi-directional Coordination (External)

What's essential?
Who has the authority?
Communications Impact,
Solutions & Action

Developing and implementing Solutions, Communicating with Essential Partners (internal and external), Establishing priorities of effort



Phase 3 (Solution and Execution Coordination)

- Modified Restoration Strategy
- Crisis Communications
- Coordination and Alignment



EARTH Ex Schedule

24 Feb	Friday	EEX	EARTH Ex IPC Teleconference	Initial Planning Conference
16 Mar	Thursday	EEX	Inject Formats Released	All Sector Coordinators
20 Apr	Thursday	EEX	EARTHEX Middle Planning Conference	Teleconference
15 May	Thursday	EEX	EEX- Final Planning Conference	Webinar
26 Jul	Wednesday	EEX	EEX Final Alignment and Coordination	All Sector Coordinators
17 Aug	Thursday	EEX	EEX Rehearsal	All Sector Coordinators
23 Aug	Wednesday	EEX	EEX Target Date 1	All Staff and Sectors
24 Aug	Thursday	EEX	EEX Target Date 2	All Staff and Sectors



Registration for EARTH Ex 2017 will open 1 May, 2017.



Current Status (20 April)

- Version 1 lane documents complete for all lanes except
 - Private sector
 - First responders
 - NISC geo-spatial
 - Citizens Preparedness
- Phase 4 feedback by 1 May (follow on E-mail)
- Version 2 lane documents will be complete by 1 June

Upcoming Actions

- Materials Links available 1 May – TBA
- Registration Open 1 June – TBA
- Marketing and Awareness – Sector Partners
- Final Planning Conference – 15 June
- Send Questions and Responses to:

John.Heltzel@EISCouncil.org

EARTH Ex 2017

**Emergency All-sector Response to
Transnational Hazards Exercise**

August 23, 2017

Discussion



EARTH Ex 2017

**Emergency All-sector Response to
Transnational Hazards Exercise**

August 23, 2017

**Current Sector Objectives
and Additional Material Follows**



Electric Sector Objectives: Cyber Mutual Assistance and Black Start Execution Coordination

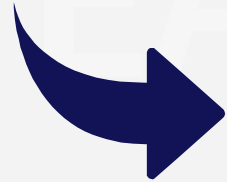
Phase 1 (Needs Assessment)

- Impact Analysis
- Internal Coordination Activities
- Operational Challenges (Internal)

What happened?

What resources are available?

What are the first steps to be taken?



Phase 2 (External Coordination & Assessment)

- Cyber Mutual Assistance Execution
- Black Start Planning Effort

What's essential?

Who has the authority?

*Communications Impact,
Solutions & Action*

*Developing and implementing
Solutions, Communicating with
Essential Partners (internal and
external), Establishing priorities of
effort*



Phase 3 (Solution and Execution Coordination)

- Black Start Execution Coordination

Water/Wastewater Sector Objectives

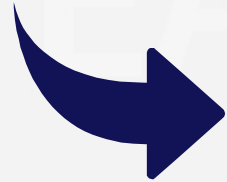
Phase 1

- Assessment
- Resource Availability
- Initial Information Requirements/Reporting

What happened?

What resources are available?

What are the first steps to be taken?



Phase 2

- Initial Decisions
- Plan Restart
- Coordinate Cross Sector

What's essential?

Who has the authority?

*Communications Impact,
Solutions & Action*

*Developing and implementing
Solutions, Communicating with
Essential Partners (internal and
external), Establishing priorities of
effort*



Phase 3

- Ensure Availability of Treatment Chemical/Resources
- Develop and Report Running Estimate
- Coordinate with Black Start Operators

Oil & Natural Gas Sector Objectives

Production, Refinement and Distribution

Phase 1 (Internal Assessment)

- Impact Analysis Activities
- Internal Coordinative Challenges (Internal)
- Establish Operational Capabilities

What happened?
What resources are available?
What are the first steps to be taken?



Phase 2 (External Coordination & Assessment)

- Critical Skills Identification
- Essential Task Execution
- Multi-directional Coordination (External)

What's essential?
Who has the authority?
Communications Impact,
Solutions & Action

Developing and implementing Solutions, Communicating with Essential Partners (internal and external), Establishing priorities of effort



Phase 3 (Solution and Execution Coordination)

- Modified Operations / Restoration Strategy
- Crisis Communications
- Coordination and Alignment

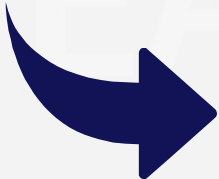


Regulatory Sector Objectives | State - PUB/PUC, Environmental, Governor, Others Federal - DOE, FERC, EPA, NRC, FEMA, Others

Phase 1

- Impact Analysis Activities
- Internal Coordinative Challenges (Internal)
- Operational

What happened?
What resources are available?
What are the first steps to be taken?



Phase 2 (External Coordination & Assessment)

- Critical Authority / Regulatory Identification
- Essential Task Execution
- Multi-directional Coordination (External)

What's essential?
Who has the authority?
Communications Impact,
Solutions & Action

Developing and implementing Solutions, Communicating with Essential Partners (internal and external), Establishing priorities of effort



Phase 3 (Solution and Execution Coordination)

- Proper Application and Execution of Appropriate Laws & Regulations
- Crisis Communications
- Coordination and Alignment



State Sector Objectives | State and Local Emergency Management, National Guard and ESF Mass Care/Medical

Note: Establishing Priorities

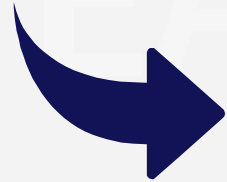
Phase 1 (Internal Assessment)

- Situational Awareness 360o
- Emergency Communications
- Public Messaging

What happened?

What resources are available?

What are the first steps to be taken?



Phase 2 (External Coordination & Assessment)

- Establish Unified Command
- Contingency Planning
- Sheltering and Mass Care

What's essential?

Who has the authority?

*Communications Impact,
Solutions & Action*

Developing and implementing Solutions, Communicating with Essential Partners (internal and external), Establishing priorities of effort



Phase 3 (Solution and Execution Coordination)

- Support of Power Restoration Efforts
- Managing Effects of Population and Economy
- Establishing Priorities for Essential Service & Supplies

Federal Sector Objectives | Energy

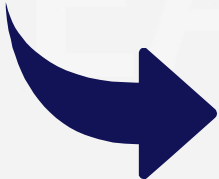
Phase 1

- Outage Extent and Scope
- Initial Cause Estimate
- Restoration Estimate

What happened?

What resources are available?

What are the first steps to be taken?



Phase 2

- Status of Oil and Gas Sector
- Status of Emergency Power Generation & Critical Resource Shortfalls

What's essential?

Who has the authority?

*Communications Impact,
Solutions & Action*

Developing and implementing Solutions, Communicating with Essential Partners (internal and external), Establishing priorities of effort



Phase 3

- Identify Black Start Status and Priorities
- Identify Regions with long term outages



Federal Sector Objectives | DHS - CIP

Phase 1

- Critical Infrastructure Protection Impact
- Cascading Impact and Status

What happened?
What resources are available?
What are the first steps to be taken?



Phase 2

- Shortfalls of Mission Essential Critical Infrastructure
- Prioritize Allocation of Resource Requirement Decisions

What's essential?
Who has the authority?
Communications Impact,
Solutions & Action

Developing and implementing Solutions, Communicating with Essential Partners (internal and external), Establishing priorities of effort



Phase 3

- Identify CI Protection Priorities
- Coordinate Critical Infrastructure Asset Requirements for Continuity Operations



Federal Sector Objectives | Emergency Management

Phase 1

- Communications and Continuity Status
- Critical Life and Safety Estimate
- Risk Communications Messaging and Capabilities

What happened?
What resources are available?
What are the first steps to be taken?



Phase 2

- Identify Critical Life Safety Requirements
- Prioritize Allocation of Resource Decisions
- Communicate Status of Resource Allocation

What's essential?
Who has the authority?
Communications Impact,
Solutions & Action

Developing and implementing Solutions, Communicating with Essential Partners (internal and external), Establishing priorities of effort



Phase 3

- Coordinate Support for Life Safety in Identified "Islands"
- Support Risk Communications
- Prioritize Resource Allocation & Decision Making



Non-Governmental Organizations Sector Objectives

Phase 1 (Coordination)

- Assess Backup Generation Capability
- Assess Manpower Availability
- Assess Backup Communications Capabilities

What happened?
What resources are available?
What are the first steps to be taken?



Phase 2 (Coordination)

- Develop Supply Plan
- Reassess and Extend Manpower Availability
- Assess Fuel Requirements and Solutions

What's essential?
Who has the authority?
Communications Impact,
Solutions & Action

Developing and implementing Solutions, Communicating with Essential Partners (internal and external), Establishing priorities of effort



Phase 3 (Coordination)

- Ensure Cross Sector Communication
- Identify Extended Manpower Strategies
- Identify resource Allocation Strategies

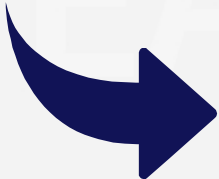


Non-Governmental Organizations Sector Objectives

Phase 1 (Operations)

- Assess Manpower Availability
- Assess Available Resources
- Assess Backup Communications Capabilities

What happened?
What resources are available?
What are the first steps to be taken?



Phase 2 (Operations)

- Identify Shelter/Feeding/Watering Strategies
- Reassess Resource Availability
- Assess Backup Generation Capabilities

What's essential?
Who has the authority?
Communications Impact,
Solutions & Action

Developing and implementing Solutions, Communicating with Essential Partners (internal and external), Establishing priorities of effort



Phase 3 (Operations)

- Identify Long term Sustainment Strategies

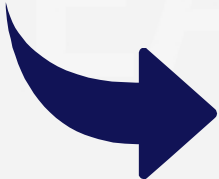


Private Sector Objectives

Phase 1 (Internal Assessment)

- Internal Impact Assessment

What happened?
What resources are available?
What are the first steps to be taken?



Phase 2 (External Coordination & Assessment)

- Critical Coordination Issues and Solutions

What's essential?
Who has the authority?
Communications Impact,
Solutions & Action

Developing and implementing Solutions, Communicating with Essential Partners (internal and external), Establishing priorities of effort



Phase 3 (Solution and Execution Coordination)

- Integration into restoration and recovery

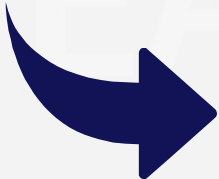


First Responders, Local Emergency Management

Phase 1 (Internal Assessment)

- Assess Manpower Availability
- Assess Available Resources
- Assess Backup Communications Capabilities

What happened?
What resources are available?
What are the first steps to be taken?



Phase 2 (External Coordination & Assessment)

- Identify Shelter/Feeding/Watering Strategies
- Reassess Resource Availability
- Assess Backup Generation Capabilities

What's essential?
Who has the authority?
Communications Impact,
Solutions & Action

Developing and implementing Solutions, Communicating with Essential Partners (internal and external), Establishing priorities of effort



Phase 3 (Solution and Execution Coordination)

- Identify Long term Sustainment Strategies

